

506B3/ R# closing station by a rising and falling action along the housing shelf of the vulcanizing station.

REMARKS

Favorable reconsideration of the present application is respectfully requested.

Claim 16 has been cancelled. Claims 1-15 are active in the application.

The specification and claims have been revised in light of the objection to the specification and the rejection under 35 U.S.C. § 112 (paragraphs 1-3). These objections are therefore believed to be moot.

The double patenting rejection of paragraph 5, and the rejection of paragraph 9, are believed to be moot in view of the cancellation of Claim 16.

All of the claims of the present application are directed to a feature of the invention whereby the vulcanizing station includes a housing shelf having plural vertical parts, and the transfer station transfers tire mold assemblies between the selected stage of the placing parts of the housing shelf and the placing part of the open and closing station by a rising and falling (i.e., vertical) action along the housing shelf. This is shown, for example, in Figure 4 wherein the transfer station D moves vertically for selectably placing the tire mold assemblies. All of the claims recite the vertical (rising and falling) movement of the transfer station relative to the vulcanizing station.

Claims 1-6 and 15 stand rejected under 35 U.S.C. § 102 as being anticipated by the U.S. patent to Irie. Claims 7-14 stand rejected under 35 U.S.C. § 103 as being obvious over Japanese '231 in view of Irie. In each case Irie was cited to teach a tire vulcanizing device having a vulcanizing station with a housing shelf having plural vertical stages, and a transfer station vertically movable along the housing shelf. However, Applicant is unable to find such

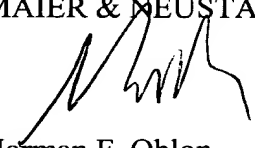
a teaching in Irie. Instead, the only arrangement shown in Irie as having vertical shelves is that of Figure 17, which shows an unvulcanized tire supply device (column 5, lines 60-61), *and not a vulcanizing device*. Irie could therefore provide no teaching of vertically stacked shelving in a vulcanizing device, either alone or in combination with Japanese '231.

As for the double patenting rejection of paragraph 7, in view of the failure of Irie to teach vertically stacked shelving in a vulcanizing device, this rejection is also traversed.

Applicant therefore believes that the present application is in a condition for allowance and respectfully solicits an early Notice of Allowability.

Respectfully submitted,

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IN THE SPECIFICATION

Page 17, please replace the paragraph at lines 14-18 as follows:

(2) When the [tier] tire mold assembly 1 is stopped, the upper movable plate 9 is lowered to connect the mold connecting device and split die operating device of the upper movable plate 9 to the upper die part of the tire mold assembly 1, and after the vulcanization is ended, the upper die part is opened according to the rise of the upper movable plate 9.

IN THE CLAIMS

--1. (Amended) A tire vulcanizing equipment comprising:

a vulcanizing station having placing parts for placing tire mold assemblies movable in a closed state and a housing shelf vertically having plural stages of the placing parts;

an opening and closing station having a placing part for placing the tire mold assembly, an opening and closing device for opening and closing the tire mold assembly placed on [this] the placing part of the opening and closing station, a carrying-out device for carrying a vulcanized tire from the tire mold assembly and a carrying-in device for carrying an unvulcanized tire to the tire mold assembly; and

a transfer station for transferring the tire mold assembly between [an optional] a selected stage of the placing parts of the housing shelf and the placing part of the opening and

closing station by [the] a rising and falling action along the housing shelf of the vulcanizing station.

2. (Amended) A tire vulcanizing equipment comprising:

a vulcanizing station having a housing shelf vertically having plural stages of placing parts for placing tire mold assemblies movable in closed state, which have pipings for supplying and discharging a vulcanizing/heating medium to the tire mold assemblies placed thereon;

an opening and closing station having a placing part for placing [the] a tire mold assembly, an opening and closing device for opening and closing the tire mold assembly placed on the placing part of the opening and closing station, a carrying-out device for carrying a vulcanized tire from the tire mold assembly and a carrying-in device for carrying a unvulcanized tire to the tire mold assembly, the opening and closing station being connected to a carrying-out line of vulcanized tires to [the] a following step and a carrying-in line of unvulcanized tires; and

a transfer station for transferring the tire mold assembly between the placing part of [an optional] a selected stage of the housing shelf and the placing part of the opening and closing station by [the] a rising and falling action along the housing shelf of the vulcanizing station.

3. (Amended) A tire vulcanizing equipment according to claim 1, further comprising:

an auxiliary station having a placing part for placing the tire mold assembly and an opening and closing device for opening and closing the tire mold assembly placed on [this] the placing part of the auxiliary station.

4. (Amended) A tire vulcanizing equipment according to claim 1, wherein

the opening and closing station is connected to [the] a carrying-out line of vulcanized tires to [the] a following step and a [the] carrying-in line of unvulcanized tires.

5. (Amended) A tire vulcanizing equipment according to claim 3, wherein the auxiliary station has a carrying-out device for carrying vulcanized tires from the tire mold assembly and a carrying-in device for carrying unvulcanized tires to the tire mold assembly.

6. (Amended) A tire vulcanizing equipment according to claim 3, wherein the auxiliary station is connected to [the] a carrying-out line of vulcanized tires to [the] a following step and [the] a carrying-in line of unvulcanized tires.

8. (Amended) A tire vulcanizing equipment according to claim 1, wherein the transfer station has a rising and falling transfer device comprising a first delivering mechanism capable of delivering the tire mold assembly and switching the guide direction of the tire mold assembly to [an optional] a selected placing part direction, a placing part for placing the tire mold assembly received by the first delivering mechanism, and a lifting mechanism for raising and lowering the first delivering mechanism and the placing part of the rising and falling transfer device along the housing shelf.

13. (Amended) A tire vulcanizing equipment according to claim 11, wherein two or more of said plurality of said circularly arranged placing parts [circular station groups having the above-described circular arrangement] are arranged in a row, and [these circular station groups] are mutually connected through guide rails allowing the movement of the tire mold assembly [between the both] therebetween.

14. (Amended) A tire vulcanizing equipment according to claim 11, wherein the transfer station comprises a delivering mechanism for delivering the tire mold assembly and a turntable rotatable so as to set the guide direction of the tire mold assembly by

the delivering mechanism to the direction of [an optional] a selected circularly arranged placing part.

15. (Amended) A tire vulcanizing equipment comprising:

a vulcanizing station having a housing shelf having plural stages of placing parts for placing tire mold assemblies movable in a closed state, which have pipings for supplying and discharging a vulcanizing/heating medium to the tire mold assemblies placed thereon;

an opening and closing station having a placing part for placing the tire mold assembly, an opening and closing device for opening and closing the tire mold assembly placed on [this] the placing part of said opening and closing station, a carrying-out device for carrying a vulcanized tire from the tire mold assembly, and a carrying-in device for carrying a unvulcanized tire to the tire mold assembly, the opening and closing station being connected to a carrying-out line of vulcanized tires to [the] a following step and a carrying-in line of unvulcanized tires; and

a transfer station for performing the transfer of the tire mold assembly between [an optional] a selected stage of the placing parts of the housing shelf and the placing part of the opening and closing station by [the] a rising and falling action along the housing shelf of the vulcanizing station.

16. (Cancelled)